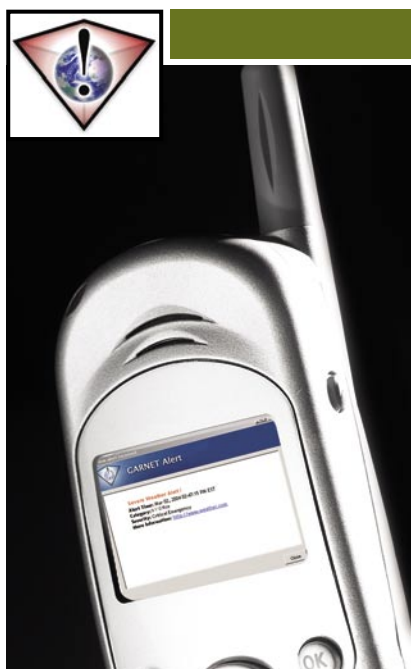




GARNET: A Pervasive Software Alert System

... for delivery of emergency and time-sensitive messages
through a variety of communication channels



Alerts can be delivered to users' desktops, e-mail, cell phones, and other devices.



Configuring alert notifications is intuitive and fast.



Authorized users create alerts through a simple-to-navigate interface.

Benefits

- **Fast:** Delivers alerts in near real-time
- **Flexible:** Supports a wide variety of communication channels
- **Scalable:** Supports a growing base of both internal and external users
- **Cross-platform compatible:** Supports multiple platforms
- **Secure:** Secures communication with Secure Sockets Layer (SSL), server push/client pull technologies, and firewalls
- **Unobtrusive:** Alerts only affected personnel, users, or customers
- **Simple:** Offers an online administration console and simple-to-use interface
- **Proven:** Has undergone extensive testing (both inside and outside a firewall) at two NASA facilities
- **Affordable:** Can be hosted on an economical, single-server setup or on a redundant server system for improved reliability
- **Accessible:** Complies with the U.S. Rehabilitation Act, providing full access to all individuals, regardless of handicap

NASA Goddard Space Flight Center invites companies to license its Global Alert Resolution Network (GARNET), an enterprise software application capable of delivering emergency and time-sensitive alerts to affected individuals via a variety of communication channels, including PCs, MACs, UNIX-based environments, cell phones, pagers, e-mail applications, and personal digital assistants (PDAs). The software also offers plug-ins that enable integration with existing notification systems, such as alarms, public address (PA) systems, and closed circuit television (CCTV). Alerts can be delivered within organizations to employees or externally to large pools of subscribers.

Applications

Federal, state, and local governments as well as education and industry can benefit from GARNET's applications:

- Emergency alerts
 - Fire or building evacuation notifications
 - Computer virus attack alerts
 - Severe weather warnings
 - National security alerts
- Supply-chain alerts
 - Trading-partner notifications
 - Enterprise Resource Planning (ERP) alerts such as out-of-stock notifications
 - Stock trading alerts
- Facilities and IT alerts
 - Network monitoring alerts
 - Facility closing
 - Road closing or construction
- Informational alerts
 - News broadcasts
 - Weather alerts

The Technology

Disseminating alerts

The heart of the simple-to-use GARNET system is a secure, Web browser-based interface. Authorized administrators enter alerts into the system, selecting severity level, message delivery method(s), and the group of affected users receiving the message. The alert is then distributed to only those users, along with a link to information such as suggested actions and instructions. Alerts interrupt end-users' work on PCs, cell phones, PDAs, and other devices, helping to ensure that the message is acknowledged.

A reliable system to secure alerts

GARNET secures alert-delivery channels using SSL, server push/client pull technologies, and firewalls. Administrators are authorized before alerts can be sent through the GARNET system. Application servers and Web servers are secured by firewalls.

System requirements/configuration

Typical installation on a server usually requires the following software:*

- Microsoft Advanced Server** (operating system)
- Apache Tomcat (application server)
- Microsoft IIS (Web server)
- Microsoft SQL Server (database)

*Other software packages may be used, such as Linux, Apache Web Server, and MySQL.

**Supports Windows NT, 2000 and XP, and Mac OS, UNIX and Linux.

Minimum configuration requires a central server with a database; hosting on redundant servers with failover and load-balancing capabilities helps improve system reliability.

Why GARNET is better

Historic alert systems, such as fire alarms and PA systems cannot provide the breadth and depth of information distributed by the GARNET system. In addition, most existing alert systems cannot avoid interrupting people who may be unaffected by the information being distributed. In contrast, GARNET sends messages to a wide range of devices, helping to reach more people in a shorter period of time. Unlike many other messaging systems, GARNET is pervasive, interrupting all applications on the user's computer to deliver emergency notifications. GARNET also contacts precisely selected people, helping to ensure that only affected personnel are interrupted.

Intellectual property protection

NASA Goddard is seeking patent and copyright protection for this software.

Licensing and Partnering Opportunities

This technology is part of NASA's Innovative Partnerships Program, which seeks to transfer technology into and out of NASA to benefit the space program and U.S. industry. NASA invites companies to consider licensing the Global Alert Resolution Network (GARNET) technology for further development and for commercial applications.

For More Information

If you are interested in more information or want to pursue transfer of this technology (GSC-14927-1), please contact:

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More information about working with NASA Goddard's Office of Technology Transfer is available online: <http://techtransfer.gsfc.nasa.gov>

To view a demo of the GARNET technology, visit: <http://techtransfer.gsfc.nasa.gov/garnet/>